

pressure by a pressure difference between the storage tank and the injection molding machine cylinder;

(2) feeding the foaming agent within a range from the starting point of the second stage of the screw to a length nine times the outside diameter of the screw in the direction of injection at the time the screw is caused to advance most forward in the direction of injection; and

(3) obtaining a foam by reducing the pressure in a cavity of the mold in the injection molding machine to low pressure including practically atmosphere pressure, injecting the resin into the cavity, and then expanding the volume of the cavity.

2. (Amended) The injection foaming process according to Claim 1 wherein the volume of the cavity is expanded by retracting metal plates in the mold after injecting and filling the resin into the cavity.

8. (Amended) The injection molding machine according to Claim 7, wherein the ratio of L₂/L₁, between the depth of the last groove of the first stage of the two-stage compression screw, L₁, and the depth of the first groove of the second stage of the two-stage compression screw, L₂, is in the range of 1.2 to 6.

9. (Amended) The injection molding machine according to Claim 8 further comprising a resin check valve installed at the point at which the physical foaming agent is injected into the injection molding machine.

10. (Amended) A resin composition suitable for injection foaming which comprises a thermoplastic resin containing as a foaming nucleator 0.1 to 5 wt% of an inorganic filler having an average particle diameter of 0.5 to 10 μ m to the thermoplastic

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resin and/or 0.01 to 1 wt%, calculated as undecomposed material, of a chemical foaming agent or its decomposed material.

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13. (Amended) The resin composition according to Claim 10 wherein the chemical foaming agent is a mixture of citric acid and sodium hydrogencarbonate at a ratio of 0.1:0.9 to 0.9:0.1 or its decomposed material.

14. (Amended) A resin composition according to Claim 10 wherein the thermoplastic resin is polyolefin.

Please cancel claims ~~3-6, 15~~ and ~~16~~ in their entirety and without prejudice.

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Please enter the following new claims.

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--17. (New) The injection foaming process of Claim 1 wherein the ratio L₂/L₁, between the depth of the last groove of the first stage of the two-stage compression screw, L₁, and the depth of the first groove of the second stage of the two-stage compression screw, L₂, is in the range of 1.2 to 6.

18. (New) The injection foaming process of Claim 2 wherein the ratio L₂/L₁, between the depth of the last groove of the first stage of the two-stage compression screw, L₁, and the depth of the first groove of the second stage of the two-stage compression screw, L₂, is in the range of 1.2 to 6.

19. (New) The injection foaming process of Claim 1 wherein the physical foaming agent is fed to the molding machine at a lower pressure that is not more than 80% of the storage pressure and is in a gas state or in supercritical condition.

20. (New) The injection foaming process of Claim 18 wherein

the physical foaming agent is fed to the molding machine at a lower pressure that is not more than 80% of the storage pressure and is in a gas state or in supercritical condition.

21. (New) The injection foaming process of claim 1 further comprising feeding the physical foaming agent through a resin check valve installed at the point of entry of the physical foaming agent.

22. (New) The injection foaming process of claim 20 further comprising feeding the physical foaming agent through a resin check valve installed at the point of entry of the physical foaming agent.

23. (New) The injection foaming process of Claim 1 wherein the physical foaming agent is carbon dioxide, nitrogen or argon.

24. (New) The injection foaming process of Claim 22 wherein the physical foaming agent is carbon dioxide, nitrogen or argon.

25. (New) The injection foaming process of Claim 1 further comprising feeding a resin into the first stage of the two-stage compression screw, which resin comprises a thermoplastic resin containing as a foaming nucleator 0.1 to 5 wt% of an inorganic filler having an average particle diameter of 0.5 to 10 μ m to the thermoplastic resin and/or 0.01 to 1 wt%, calculated as undecomposed material, of a chemical foaming agent or its decomposed material.

26. (New) The injection foaming process of Claim 25 wherein the inorganic filler is talc, silica, calcium carbonate or barium sulfate.

27. (New) The injection foaming process of Claim 21 wherein